# APPLICATION FOR A PERMIT TO CONSTRUCT AND OPERATE A CLASS I LANDFILL FACILITY

JUNGO DISPOSAL SITE

**Humboldt County, Nevada** 

**VOLUME III** 

## **PLAN OF OPERATIONS**

REVISION 2

**Prepared For** 

Jungo Land & Investments, Inc.

Prepared by:

Golder Associates Inc.

1009 Enterprise Way, Suite 350

Roseville, CA 95678

(916) 786-2424

May 2009 063-7079-100

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## 1.0 INTRODUCTION

Jungo Land & Investments, Inc. (JLII), the landfill owner and operator, is submitting the following Plan of Operations for a Class I municipal solid waste disposal site as required by the general provisions for solid waste disposal defined in the Nevada Administrative Code (NAC 444.684). This Plan of Operations was prepared by Golder Associates Inc. and SCS Engineers, and submitted to the Nevada Division of Environmental Protection (NDEP), Solid Waste Bureau, State Solid Waste Authority for Humboldt County. This plan conforms to the regulations that govern solid waste disposal in the State of Nevada, and is submitted as part of the *Application for a Permit to Construct and Operate a Class I Solid Waste Disposal Site at the Jungo Disposal Site, Humboldt County, Nevada.* 

As required by NAC 444.684, this Plan of Operations presents the general procedures for operation and maintenance, fire control, litter prevention, and handling of various types of waste, which are either prohibited or accepted for disposal at the site when specifically addressed within this Plan of Operations. In addition, this plan addresses the compliance of the facility with the requirements set forth in NAC 444.6665 through 444.6678, and NAC 444.686 through 444.6887, including procedures for the following activities: compacting and covering solid waste; preventing the receipt and disposal of liquid, hazardous, and PCB wastes; controlling run-on and run-off drainage; providing nuisance control; monitoring explosive gas; and, providing for site access control. A discussion of the conformance of the site with respect to location restrictions defined in NAC 444.678 through 444.6795 is also provided.

The Jungo Disposal Site will serve as a regional disposal site for portions of Northern California that generally includes the nine counties which make up the San Francisco Bay Area, and including tributary communities along the rail route. Refuse will be delivered to the site by primarily by rail at an estimated average annual rate of up to 4,000 tons/day. In addition, it may be possible that wastes generated in Humboldt County and other counties of the State of Nevada may also be disposed of at the facility.

#### 1.1 Site Description

The Jungo Disposal Site will be located on a parcel totaling approximately 634 acres. Site location is graphically illustrated on **Figure 1**. The site is accessed via Jungo Road via the Jungo Road crossing of the Union Pacific Railroad. It is approximately 25 miles west of Winnemucca in an area identified as Desert Valley on a County Road identified as Jungo Road. The location of the property is described by the Public Land Survey system as Township 35 North, Range 33 East, Mount Diablo Baseline and Meridian, Section 7. **Figure 2** displays the Township and Range map for the area.

The facility will be operated by JLII in accordance with applicable State of Nevada solid waste regulations. The land is currently owned by Nevada Land and Resources, Inc. but will be acquired by JLII prior to development. JLII currently has a leasehold interest with an option to purchase the property, which JLII plans to exercise once the necessary State permits have been obtained. Property ownership documents will be maintained in the landfill operating record.

The property site is surrounded by Bureau of Land Management (BLM) land. The BLM property is not zoned. It is considered open range. **Figure 2** also serves as the Site Property Map to comply with NAC 444.680(2). Waste will be delivered to the landfill site via the Union Pacific Railroad. A private transload facility will be constructed by JLII adjacent to the landfill.

Daily operations at the Jungo Disposal Site will be conducted under the direct management of the assigned Operations Manager of JLII who will report to a General Manager who provides guidance and direction for the facility. The Operations Manager will be reachable at the JLII office location.

The Jungo Disposal Site will be operated as a Class I solid waste disposal landfill. With its link to the rail system, the Jungo Disposal Site will receive wastes generated from outside of Humboldt County. However, it may be possible that certain in-county wastes may also be disposed of at the facility.

The Jungo Disposal Site will be capable of operating 7 days per week, 24 hours per day. However, peak hours of activity will be associated with the arrival of a unit waste train. Generally a full train can be unloaded and the waste placed in the landfill within a 10-hour period. At other times, personnel may be onsite for maintenance, monitoring and construction purposes.

#### 1.2 Site Facilities

The Jungo Disposal Site will include the following facilities:

- A rail yard for unloading and loading waste containers;
- An administrative trailer:
- A equipment maintenance shop; and
- A break-room trailer for equipment operators and laborers.

**Figure 3** shows the anticipated location of the initial facilities development. The locations of the equipment maintenance shop, and administrative and break-room trailers are anticipated to be temporary and may be relocated on the site as the landfill is developed. Specifically, the equipment maintenance shop and break-room trailer are likely to be periodically relocated near the active disposal area to reduce the travel time for equipment and site personnel.

The administration trailer and break-room will provide potable water and restrooms for site personnel. Wastewater will be discharge to a septic system located at the northwestern boundary of the site. Percolation tests will be completed to properly size and design the septic system.

## 2.0 LOCATION RESTRICTIONS

Sections 444.678 through 444.6795 of the Nevada Administrative Code (NAC) require that the location of a new municipal solid waste disposal facility satisfy all restrictions defined by NAC 444.678 through 444.6795. The following sections discuss the location of the Jungo Disposal Site relative to these location restrictions.

#### 2.1 General Restrictions

The location of a solid waste disposal landfill must satisfy several general location criteria defined in NAC 444.678. These criteria involve the following: accessibility; prevention of degradation of waters of the state; prevention of uncontrolled landfill gas migration; availability of cover material; conformance with land use planning and proximity to dwellings, highways, surface water, and ground water. In addition, the location of a new solid waste disposal landfill must meet with the approval of the Nevada Department of Environmental Protection (NDEP). The conformance of the site with respect to these general location restrictions is discussed below.

#### 2.1.1 Accessibility

Access to the Jungo Disposal Site is via Jungo Road, which is an improved, County maintained, gravel road. Off of this road, the operator will construct a private access road across the Union Pacific Railroad Right of Way from Jungo Road crossing eastward to the disposal site. Access on this private road will be gate controlled. All on-site roads will be cleared (snow removal in the winter months) and maintained using landfill equipment and operators.

## 2.1.2 Prevention of Degradation of Waters of the State

There are no surface waters located within 1,000 feet of the site. Depth to groundwater is defined in the Report of Design of this Application. Groundwater at the site is approximately 58 to 60 feet below ground surface. The construction of surface drainage controls and landfill liners will prevent degradation of Waters of the State. Drainage control, landfill liners, leachate and gas collection and control systems are discussed in detail in the Report of Design (Volume I).

## 2.1.3 Prevention of Uncontrolled Landfill Gas Migration

Subsurface landfill gas migration will be prevented by the landfill liner and gas collection and control systems. The purpose of the gas collection system will be to provide a means of collecting landfill gas in a safe manner so that it can be vented or properly disposed. Perimeter monitoring will be performed to allow for the detection of methane gas concentrations in excess of the lower explosive limit (LEL). Permanent monitors with alarms will be installed in all structures to ensure continual monitoring. Uncontrolled migration of landfill gas will be controlled at the site per NAC 444.678[3].

## 2.1.4 Availability of Cover Material

An adequate quantity of earth cover is available at the site that is workable and compactable and does not contain organic material of a quantity to harbor or breed disease vectors. As discussed in detail in the Report of Design (Volume I) daily cover soils will be supplemented by the extensive use of Alternative Daily Cover (ADC) whenever practicable. Cover soil will be augmented with the use of ADC, including but not limited to tarps, chipped tires, greenwaste, or dried sludge. Soil will be obtained through excavation associated with cell and liner development. Site exploratory investigations, including the drilling of four borings indicate a subsurface lithology of upper silty sands from ground surface to depths of approximately 35 to 40 feet below ground surface. Silty clays and clayey silts underlie the uppermost

silty sands. Middle sands underlie the upper silty clays. A lower layer of clay and clayey sands underlies the middle sands. A final layer of lower sand and silty sands were encountered at approximately 115 feet below ground surface. See Section 2.1.4.2, Site Geology, Report of Design (Volume I).

## 2.1.5 Conformance with Land Use Planning

The Jungo Disposal Site is surrounded by publicly owned land administered by the Bureau of Land Management (BLM). Surrounding land is designated as open range by the BLM. The disposal site is zoned M3 which can accommodate a disposal site as a special use. Union Pacific Railroad (UPR) owns 100-feet of land on each side of the rail line crossing through the property. The Jungo Disposal Site will not encroach on this property. An access easement will be obtained from UPR to Jungo. A Special Use Permit was obtained from Humboldt County in April, 2007. As noted on the Title Report, no other easements exist on the property. The Preliminary Title Report, dated January 28, 2008 is attached as **Appendix A**. A site survey map is included in **Appendix B**.

## 2.1.6 Proximity to Dwellings, Highways, Surface Water and Groundwater

The landfill location does not lie within one-fourth mile of a residence or place of public gathering. The nearest highway is approximately 25 miles away. The site does not lie within 1,000 feet of a surface water body. Subsurface investigations have determined that groundwater beneath the site is approximately 58 to 60 feet below ground surface. See Section 2.1.5.2, Report of Design (Volume I).

The designated ground water basin underlying the site is defined as State of Nevada Administrative Groundwater Basin 31. A map illustrating Designated Regional Groundwater Basins and Nearby Rivers is presented in **Figure 4**. The nearest surface water body is the Humboldt River located more than 15 miles to the southeast and is located in a separate hydrographic basin.

## 2.1.7 <u>Regulatory Approval</u>

The location of a class I site must meet with the approval of the solid waste management authority. The location of a class I site must comply with the requirements set forth in NAC 444.6765 and 444.6783 through 444.6795.

#### 2.2 Airport Safety (NAC 444.6783)

In accordance with NAC 444.6783, a Class I site located farther than 10,000 feet from the end of any airport runway used by turbo-jet aircraft, or 5,000 feet of the end of any airport runway used by piston-type aircraft, does not pose a hazard to aircraft. The Humboldt County Airport is the closest airport to the subject property. The airport is located five miles west of the City of Winnemucca. This is about 20 miles from the Jungo Disposal Site and well in excess of the 10,000 feet requirement.

## **2.3** Floodplains (NAC 444.6785)

New or existing municipal solid waste disposal facilities or lateral expansions located in a 100-year floodplain must demonstrate to NDEP that the unit will not restrict the flow of a 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in a washout of solid waste. Data available from the U.S. Department of Housing and Urban Development, Federal Emergency Management Agency (FEMA), Community Panel Map Index for Humboldt County Unincorporated Areas, indicate that the area has not been mapped and therefore, is not in a flood zone and has not been designated as a floodplain. A review of the existing site topography indicates that there are no major drainages or washes which cross the site. The site will be designed to drain rainwater away from the active cell after a rainfall event so that standing water will not be allowed to pool on the site. The surrounding mountains, especially the Eugene Range most likely have drainages running from the down

slopes, but the Jungo Disposal Site lies in a flatland area and has no such down slopes. The site is located within a desert basin where water precipitation temporarily collects in shallow depressions until it evaporates or infiltrates into the underlying soils.

## 2.4 Wetlands (NAC 444.679)

Lateral expansions of new or existing municipal solid waste disposal facilities must not be located in wetlands, as stated in NAC 444.679. NAC 444.679(2) defines "wetlands" as those areas that are "inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil, including swamps, marshes, bogs, and other similar areas." Vegetation on the property is not the type associated with swamps, marshes, bogs or other similar areas. On site groundwater monitoring well development has confirmed that there are no saturated soils at or near the ground surface.

## 2.5 Fault Areas (NAC 444.6791)

Lateral expansions at new or existing municipal solid waste landfills may not be located within 200 feet of a fault, which has had displacement in Holocene time unless the owner or operator demonstrates that a lesser setback will prevent damage to the structural integrity of the landfill, according to NAC 444.6791. A review of the *Preliminary Map of Young Faults in the United States as a Guide to Possible Fault Activity* (USGS, 1978) does not indicate the presence of Holocene faults in the vicinity of the Jungo Disposal Site location.

## 2.6 Seismic Impact Zones (NAC 444.6793)

NAC 444.6793 states that new or lateral expansions at a municipal solid waste landfill shall not be located within a "seismic impact zone unless the owner or operator submits proof that all structures for containment, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site." The site is located within a seismic impact zone that has a 10 percent probability of exceedance in a 250 year period of experiencing a seismically induced peak ground acceleration of 0.1g or greater. The site has been designed to withstand the peak ground acceleration without damaging environmental containment systems and controls, including the liner, systems for the collection of leachate, system for the control of surface water and cover systems.

The Jungo Disposal Site containment systems and environmental controls have been designed to withstand an earthquake event resulting in a PGA of 0.28g without compromising the integrity of the containment systems and environmental controls. This PGA value is associated with an earthquake event producing ground accelerations at the site that correspond to 10 percent chance of exceedance during a 250-year period. Section 2.3 and 2.3.1 of the Report of Design describes these seismic impact evaluations.

## **2.7** Unstable Areas (NAC 444.6795)

In accordance with NAC 444.6795, the owner or operator of a new or existing landfill or lateral expansions at a municipal solid waste disposal landfill must demonstrate that engineering measures have been incorporated into the design of the landfill to ensure that the integrity of the structural components of the landfill will not be disrupted as a result of the location of the landfill in an unstable area. This demonstration must consider on-site or local soil conditions that may result in significant differential settling, on-site or local geologic or geomorphologic features, and on-site or local man-made features or events, both surface and subsurface.

As described above, a field investigation was undertaken at the site, which included four borings to ground water, investigation of geologic or geomorphic features and man-made features or events. Information obtained during this investigation indicates that there are no rock types mapped in the vicinity of the landfill, which are characteristic of "karst terrains". Site soils are expected to experience consolidation under loading by refuse, but the landfill has been designed to accommodate settlement without adversely affecting the liner system. See Section 2.3.1, Report of Design (Volume I).

## 2.8 Proof of Compliance (NAC 444.678)

Based on the above analysis, the location of the landfill will meet the criteria for approval of the NDEP as required by NAC 444.678(7). The inclusion of this information in the *Application for a Permit to Construct and Operate a Class I Solid Waste Disposal Site at the Jungo Disposal Site, Humboldt County, Nevada* and the official operating record for the site, maintained as part of the Operating Plan at the Jungo Disposal Site office constitutes the submission of proof required by NAC 444.6765.

## 3.0 EQUIPMENT AND PERSONNEL (NAC 444.684(1))

Most ongoing site activities, including cover soil excavations, waste compaction, and daily cover material application, will be performed by the use of trailer tippers, dozers, wheel loaders, scrapers, compactors or equivalent equipment. A motor grader and water truck (minimum 3000-gallon capacity) will also be used on site. Standard pickup trucks or large SUV's will be used for landfill site personnel transportation. An adequate number of wind screens will be used to prevent blowing trash from escaping the site. Routine maintenance and fueling will be conducted onsite. As necessary, equipment will be taken offsite for major repairs. An equipment maintenance shop will be housed on the property in a pre-fabricated building.

The Jungo Disposal Site will operate under the guidance and direction of a General Manager. The General Manager will be assisted by an Operations Manager. Waste handling and environmental stewardship activities will be handled on a daily basis by equipment operators and laborers. It is anticipated that when operating at a volume of one trainload per day, site personnel will number between 25 and 30 people. Site personnel duties, in general, will include overseeing and conducting the general operation of the landfill, maintaining compliance with the permit requirements, overseeing equipment, daily activities, including recording incoming waste volumes, screening loads for prohibited wastes, equipment operation and maintenance, and site maintenance.

## 4.0 FIRE CONTROL PROGRAM (NAC 444.684(2a))

The fire control program for the Jungo Disposal Site will consist of provisions for fire prevention and fire suppression administered under the direct control and management of onsite personnel. Contingency plans to be initiated in the event of a fire at the landfill are discussed in Section 15.0 to 15.8 in this Plan of Operations. Fire control at the site will consist of the following elements:

Fire extinguishers will be installed in the gatehouse, on each site vehicle, on each piece of equipment at the site, located at the un-loading station near the rail line, and in any structure. Extinguishers will be periodically checked and serviced to ensure that they function properly. All permanent structures on site will be inspected prior to start of operations for conformance with Uniform Building Code Regulations for fire prevention. Alterations, remodels, or expansions of structures on the site will be performed by licensed contractors and constructed in accordance with all applicable fire and safety regulations. All personnel at the site will be issued radio or other communications equipment, allowing them to report on any fire outbreak without delay.

Fire breaks will be maintained on the perimeter of the property. A soil stockpile will be kept near the active disposal area and will be used to smother burning or smoldering waste, if necessary. A minimum 3000-gallon water truck equipped with hoses that can be used in the event of a fire will be stationed on-site at all times and maintained in proper working order. Water can be used to extinguish burning or smoldering waste as necessary.

If a fire breaks out, site personnel will call the Humboldt County Fire Department. Onsite personnel will assess the severity of the fire and determine whether the available equipment will be sufficient to fight the fire. Onsite landfill personnel will be trained to provide immediate fire suppression in the case of a small event (as a rule of thumb an area contained to 10 feet by 10 feet or less) at or near the active face. Staff will immediately determine if any potential health hazards exist, including toxic chemical fires. If no health hazards exist and the fire is manageable with on-site resources (as a rule of thumb an area contained to 10 feet by 10 feet or less), the onsite personnel should use fire extinguishers mounted on landfill vehicles, and cover soils stockpiled near the active face as a first line of defense to smother the burning or smoldering area. Water will only be applied to the active face if needed.

In the event of a larger fire, or an uncontrolled fire, or if health hazards exist that cannot be managed by onsite personnel, the personnel will evacuate the area and the Humboldt County Fire Department will be contacted and the equipment operator and support personnel will be withdrawn from the area. Estimated response time for the local fire department (Winnemucca, NV (775)625-2688) is approximately 30 minutes. The local fire department has the following firefighting equipment: 4,000 Gallon Water Tender, 3 Structural Fire Engines (1,000 Gallons each, 2 of which have 4x4 capability), 1 Fast Attack vehicle (4x4, 250 Gallon water tank), 1 Rescue Engine (Jaws of life, 4x4, and 750 Gallon water tank). On arrival at the landfill, Fire Department personnel will assume responsibility for continued fire abatement activities from the General Manager on site.

In the event of a structure fire, extinguishers and a water truck will be utilized to control the fire. If the fire cannot be controlled, the Humboldt County Fire Department will be notified immediately.

Onsite staff will maintain records of fire training and any fire occurrences at the site, whether responded to by emergency personnel or not. These records will be entered into the operating record and will include the date and time the fire occurred, the location and suspected cause of fire, measures used to control the event, accidents or injuries sustained in suppressing the fire, and whether or not an emergency response team was required. An incident log will be kept up to date at the project site office, recording any incidence of fire that may occur at the site.

## 5.0 LITTER CONTROL PROGRAM (NAC 444.684(2b))

Litter control measures will be implemented at the Jungo Disposal Site to prevent scattering of papers and other lightweight debris. The primary control measures will include daily compaction and covering of waste. A temporary litter fence will be installed around the active disposal area to control off-site migration of litter from the direction of prevailing winds. Portable litter fences will be strategically placed at and around the active disposal areas. This may also include the placement of portable litter control barriers. Site attendants will be trained in proper litter control and will perform litter pick-up on a daily basis.

## 6.0 WASTE HANDLING PROCEDURES (NAC 444.684(2c))

NAC 444.684(2c) requires that the Plan of Operations describe provisions for the disposal of any special wastes accepted at a municipal solid waste disposal landfill.

Only solid waste will be accepted for disposal. The waste will be from residential, commercial and selected special wastes, which will include construction and demolition (C&D) wastes, waste tires, municipal wastewater treatment sludges, and asbestos containing materials. Wastes will be containerized for rail delivery to the disposal site. At the point of loading, most wastes will be commingled. Exceptions to commingling can include sludges, asbestos wastes, tires, and inerts. No hazardous wastes will be accepted. Specific waste handling procedures have been developed for several of the segregated waste types accepted for disposal. The Jungo Disposal Site will not accept bulky metal waste, medical waste, liquid waste, and sludges that have not been solidified, such as pumped sewage sludges, raw sewage, and septic tank sludges.

JLII anticipates that the majority of the waste stream will be comprised of municipal solid waste from residential and commercial sources. The estimated quantities of the MSW and the various special wastes are summarized as follows:

• Residential and Commercial MSW: 70% to 100%

Contaminated Soils (non-hazardous)
 0 to 30%

• C&D Wastes: 0 to 15%

• Tires: 0 to 15%

Wastewater treatment sludges: 0 to 15%

Asbestos containing Materials: 0 to 15%

The quantities of special wastes may vary seasonally depending on the length and size of the disposal contracts. However, residential and commercial MSW is expected to comprise at least 70 percent of the waste stream, and at times, may comprise the entire waste stream. A brief discussion of the handling procedures for special wastes is presented in the sections 6.1 to 6.8 of this Plan of Operation.

Trains loaded with filled waste containers will enter the unloading facility on a schedule coordinated with the Union Pacific Railroad. The schedule will be established in advance based on the number of unit trains that will be used per regular run. Containers will be transported on flat bed rail cars. Loaded container manifests will be provided to the unloading facility prior to train arrival. Containers filled with solid waste will be localized on specific flat cars. Containers filled with special waste materials, will be source-separated at the point of loading and redirected as appropriate.

Containers loaded with solid waste will be off-loaded via inter-modal cranes and/or reach stackers from the flat cars to waiting transfer truck rigs. Loaded containers will be transported to the active cell where they will be tipped and returned for reloading when the flat cars have been emptied. Containers filled with special waste will be off-loaded to waiting transfer trucks and then transferred to designated disposal areas at the site for tipping, cover and/or compaction.

All containerized loads delivered to the site will have undergone inspection and waste exclusion screening prior to loading into the rail transport containers. Jungo Disposal Site will require that all points of origin for the containerized wastes employ a hazardous waste exclusion program. The programs must also be applied to PCB wastes and all regulated wastes noted herein.

This will include an initial visual inspection of all incoming waste. Any suspect materials will be isolated from the waste mass. As needed, the materials may be pulled for sampling from the greater mass of commingled materials until lab certification has been returned to the loading station clearing way to determine their potential contamination potential. The suspect materials will be stored separate from the waste mass. Any materials requiring prior characterization must be documented appropriately prior to loading at the point of origin onto a rail car.

## 6.1 Open burning of waste (NAC 444.640, NAC 444.6675)

Open burning of solid wastes is prohibited at the site, in accordance with NAC 444.640.

## 6.2 Construction and Demolition Debris (NAC 444.652)

The Jungo Disposal Site will accept construction and demolition (C&D) debris at the landfill. C&D debris will be delivered in segregated rail containers. Generally, C&D materials are recycled for reuse prior to transporting long distances. C&D debris transported to and disposed of at the Jungo Disposal Site will most likely consist of C&D residues (i.e. screenings) generated from recycling. C&D residues will be used as alternative daily cover or disposed of with the residential and commercial MSW. If delivered to the site, larger C&D debris will be track-walked with a dozer or a compactor to break down the material to allow a maximum 18-inch high lift of ADC.

NAC 444.652 states that "landfills that incorporate large quantities of C&D material of a combustible nature must be cross-sectioned into cells by compacted cover material to prevent the spread of accidental fires. Large quantities of C&D debris of a combustible nature are not anticipated. If combustible C&D debris comprises more than 25 percent of the total daily waste volume, the combustible C&D debris will be managed as follows:

- The combustible C&D debris will be temporarily stockpiled on site, but not on landfilled wastes. Individual stockpiles shall be a maximum of 10 feet high and measure no more than 150 feet by 150 feet in plan area. Stockpiles shall be located at least 200 feet apart to minimize fire hazard.
- The combustible C&D debris will be stockpiled until it can be used for ADC or it can be disposed of with other wastes such that it comprises less than 25 percent of the total waste volume. C&D debris will not be stockpiled for a period longer than 12-months.

As an alternative to stockpiling, the combustible C&D wastes may be disposed of within a cross-section cell that is covered by non-combustible cover material. If this approach is implemented, the Jungo Disposal Site will contact the Nevada Department of Environmental Protection to determine the location and dimensions of the cells for the combustible C&D wastes.

## **6.3** Medical Waste (NAC 444.646)

Untreated medical wastes will not be accepted at the Jungo Disposal Site. Untreated medical wastes are medical wastes that have not been properly sterilized through a process such as autoclaving.

#### 6.4 Asbestos (NAC 444.971, NAC 444.974, NAC 444.975, NAC 444.976)

Asbestos will be delivered to the Jungo Disposal Site in segregated and properly labeled rail containers to separate asbestos wastes from other waste materials. Asbestos wastes accepted at the Jungo Disposal Site will adhere to the following conditions pursuant to NAC 444.971, NAC 444.974, NAC 444.975 and NAC 444.976:

- Asbestos waste must be adequately wetted and be properly containerized when received at the site to prevent fiber release;
- Waste containers must be labeled with a warning label that conforms to the requirements of 40 CFR Part 61.149(2); and,
- Access points to the asbestos disposal area will be clearly marked by appropriate signage.

If and when regulated asbestos wastes are received at the landfill, trained onsite staff will:

- Verify the quantities of waste received, sign off on the waste shipment record, and send a
  copy of the waste shipment record to the generator as recorded by the loading station
  within 30 days;
- Require containers that have transported asbestos waste to be marked with warning signs as specified in 40 CFR Part 61.149;
- Inspect delivered loads to verify that the asbestos waste is properly contained in leakproof containers and labeled properly;
- Place asbestos containers in a separate area of the disposal site with sufficient care to avoid breaking the containers;
- Record the location, quantity and date of disposal of any asbestos waste;
- Cover the waste within 24 hours with a minimum of six inches of material that does not contain asbestos, or if the waste is not properly containerized, cover immediately with six inches of material that does not contain asbestos;
- Limit access to the asbestos disposal area until the waste has been covered with six inches of material, which does not contain asbestos; and,
- Upon closure of the asbestos disposal area, cover the area with a minimum of 30 inches of cover material.

If the asbestos waste is in a condition that may cause significant fiber release during disposal, the load will be rejected at the point of loading. If the wastes are not properly containerized, that portion of the load will be rejected at the point of loading. If the wastes are not properly containerized and the load is inadvertently delivered and accepted at the Jungo Disposal Site, the load shall be thoroughly soaked with a water spray prior to unloading, disposed of in the asbestos disposal area, and immediately covered with six inches of non-asbestos material which prevents fiber release. The operator will then thoroughly rinse the rail haul container with the rinse water collected in a watertight container. The rinse water, which is anticipated to be a small volume (less than 100 gallons), will be disposed of in the asbestos portion of the landfill and immediately covered with six inches of non-asbestos material which prevents fiber release outside of the landfill.

In summary, NAC 444.974 requires each transporter to notify the landfill operator at least 24 hours before delivery of the asbestos. Upon accepting the delivery of asbestos, in accordance with NAC 444.975, each operator shall inspect each load to verify that each container and label complies with the requirements that may cause the release of fibers during disposal and the landfill operator shall notify the solid waste management authority. Thus asbestos waste will only be accepted at the landfill if packaged and manifested in accordance with all applicable regulations. The landfill will not accept asbestos waste unless notified at least 24 hours prior to delivery. Each delivery will be checked by the gate operator for compliance with the federal, state and local regulations. If a delivery is found to be out of compliance, the attendant will notify the landfill supervisor who will contact the proper regulatory authority. If a customer is found to be in non-compliance on a regular basis, their rights to use the landfill will be terminated.

## 6.5 Tires (NAC 444.648)

Waste tires will be delivered in segregated rail containers. Waste tires which are disposed of by land filling and which are not incorporated with other wastes in a landfill for which a permit has been issued by NDEP pursuant to NAC 444.6405 will be chipped, split or otherwise handled in a manner approved by NDEP. It is anticipated that waste tires will be chipped or split prior to delivery to the site. Tires that are delivered to the site that have not been chipped or split will be temporarily stockpiled until they are chipped or split and then disposed of or used as ADC. If a temporary waste tire stockpile is necessary, the stockpile will be located within the permitted landfill footprint, but outside of landfilled wastes. The maximum size of the temporary waste tire stockpile shall be 50 feet by 50 feet in area and reach a maximum height of 10 feet. Waste tires will not be stockpiled for a period longer than 12 months.

Chipped and screened tires may be used as an ADC at the landfill. This will involve mixing the chipped tires with cover soil prior to placement in order to reduce the volume of cover material utilized.

#### 6.6 Liquid Waste Exclusion Program (NAC 444.692)

Excluding the small quantities of rinse water that might result from the unlikely and infrequent rinsing of asbestos containers on-site, liquid wastes will not be accepted at the landfill. As part of the waste acceptance and screening program described in Section 6.8, the site will also identify and exclude liquid wastes. The majority of the exclusion occurs at the source, but site personnel also will be trained to identify liquid wastes. Suspicious containers, such as drums, will be inspected and excluded if they contain liquid wastes. Wastes that appear excessively moist will be tested to determine whether they contain free liquids per a paint filter test (EPA Method 9095), Wastes that contain free liquids will not be disposed of at the Jungo Disposal Site.

## 6.7 Sewage Sludge and Septic Tank Pumpings, Commercial Grease Traps and Sand-Oil Separators (NAC 444.646, NAC 444.650, and NAC 444.654)

Sewage sludge, which includes wastewater and water treatment sludge, will be delivered in segregated loads and will be disposed adjacent to the working face of the landfill or processed for use in ADC or landfill construction as described below. Sludge will be solidified, such that it does not contain free liquids per a paint filter test (EPA Method 9095), prior to transport and disposal and delivered in rail containers or locally by trucks. As an alternative to disposing of sludge, the sludge may be spread and dried on the landfill and then used as alternative daily cover.

No raw sewage, septic tank pumpings, septic tanks, or grease trap wastes will be taken at the site. As required by NAC 444.646, 444.650, and 444.654, dried sewage sludge, and oil soaked wastes may be disposed at a solid waste disposal landfill only if the Plan of Operations includes provisions for the handling and disposal of these wastes, and if the Plan is approved by the solid waste management

authority. The Jungo Disposal Site will accept solidified sewage sludge and oil soaked wastes such as sand-oil separator waste. Provisions for the acceptance, handling, and disposal of sewage sludge and oil soaked wastes in accordance with NAC 444.646 and NAC 444.654, are outlined below.

Sewage sludge when not disposed in the landfill above will be used in combination with soil for landfill cover or for operations layer construction. As needed, the sludge will be spread on areas of the property, tilled into native soils and picked up when dry with landfill equipment, mainly scrapers, and stockpiled for future beneficial uses such as landfill cover or for the operations layer construction (a component of the liner system).

Sand-oil separator wastes will be disposed in the lined landfill. Sand/oil separator materials must be analytically sampled at a certified laboratory before they are loaded at the originating transfer point to ensure they do not exceed regulated hazardous constituent levels. It will be the responsibility of the hauler to provide this documentation/manifest to operators at Jungo Disposal Site before the materials are accepted. Accordingly, such wastes will not be loaded and hauled to the site without demonstrating compliance with regulated hazardous constituent levels. Jungo Disposal Site will require the generator to provide certified analytical results that demonstrate compliance or absence of hazardous constituent levels. As noted above, all wastes being loaded will also be screened to insure that neither hazardous waste nor PCB wastes will be transported to the Jungo Disposal Site.

## 6.8 Hazardous/PCB Waste Exclusion Program (NAC 444.6665)

The facility is not permitted nor designed for receipt of regulated quantities of hazardous waste or polychlorinated biphenyl (PCB) containing wastes. Pursuant to NAC 444.6665, the operator shall carry out a program which is designed to detect and prevent the receipt or disposal of regulated hazardous waste or PCB wastes. For the purposes of this provision, hazardous waste is defined as those wastes described in Title 40 of the Code of Federal Regulations (40 CFR) Part 261. The waste exclusion program must also be applied to PCB wastes as defined in 40 CFR Part 761.3. These procedures include pre-screening of incoming loads, random inspection of incoming loads, records maintenance, personnel training, hazardous waste handling, and notification of the solid waste management authority. Jungo Disposal Site will implement a series of internal procedures, outlined below, to satisfy this requirement. They will be implemented under the authority of on-site personnel.

## 6.8.1 Pre-screening of Incoming Loads

All containerized loads delivered to the site will have undergone inspection and waste exclusion screening prior to loading into the rail transport containers. Jungo Disposal Site will require that all points of origin for the containerized wastes employ a hazardous waste exclusion program. The programs must also be applied to PCB wastes and all regulated wastes noted herein.

This will include an initial visual inspection of all incoming waste. Any suspect materials will be isolated from the waste mass. As needed, the materials may be pulled for sampling to determine their contamination potential. The isolated materials will be stored separate from the greater mass of commingled materials until lab certification has been returned to the loading station clearing any suspect material. Any materials requiring prior characterization must be documented appropriately prior to loading at the point of origin onto a rail car.

## 6.8.2 Random Inspection of Incoming Loads

Site personnel will be trained and required to visually inspect all incoming loads at the working face to identify the nature of the waste intended for disposal. Any suspect materials will be isolated from the larger mass of co-mingled material. Maximum care will be exercised by trained site personnel in isolating

the waste, conducting an initial investigation, gathering any needed sample for laboratory testing and temporarily isolating the materials from the waste face. Only upon receipt of certified laboratory clearance will the material be disposed. If lab results indicate the materials may be a regulated contaminant the materials will be properly stored and isolated with notification being forwarded to the solid waste management authority prior to arranging for appropriate handling and disposal.

Wastes that are suspected of being hazardous will be handled and stored as a hazardous waste until proven otherwise. If wastes temporarily stored at the site are determined to be hazardous, the operator will appropriately store the waste until it is removed from the site. If hazardous wastes are to be transported from the landfill, they will be stored at the landfill in accordance with the requirements of a hazardous waste generator, be manifested and transported by a licensed transporter and, disposed of at a permitted treatment, storage, or disposal (TSD) facility. JLII will use licensed, certified response personnel to handle these wastes. NDEP will be notified of the waste characterization of any rejected loads. NDEP will be contacted for guidance on instructions for proper disposal.

#### 6.8.3 Records Maintenance

A record of all loads inspected and those determined to be hazardous will be maintained in the operating record and made available to NDEP upon request. Inspection records will include the date and time waste loads were received and inspected, analyticals, observations made by landfill personnel, a description of rejected loads, and the rationale for rejection and a description of the ultimate disposal location.

## 6.8.4 Training of Landfill Personnel

Landfill personnel will be trained in the identification of containers and labels used for hazardous and PCB wastes. Training for hazardous material screening procedures will address hazardous waste identification and handling, safety precautions, and record-keeping requirements. Documentation of personnel training will be included with the operating record for the landfill.

#### 6.8.5 Handling Procedures for Hazardous or PCB Wastes

The General Manager and/or operators at the landfill will be responsible for the management of any hazardous and PCB wastes, which may be discovered in the waste stream. In the event that hazardous or PCB wastes are discovered following receipt at the landfill, site personnel will enact the following hazardous or PCB waste management program as defined in NAC 444.6665:

## Operating criteria - Program for detecting and preventing disposal of regulated hazardous waste and PCB wastes. ( $\underline{NAC}$ 444.6665)

- 1) The owner or operator shall carry out a program at the municipal solid waste landfill unit for detecting and preventing the disposal of regulated hazardous waste and PCB wastes. The program must include, but is not limited to:
  - a) Random inspections of incoming loads;
  - b) Records of inspections;
  - c) Training persons employed at the unit to recognize regulated hazardous waste and PCB wastes;
  - d) Procedures for handling hazardous waste or PCB wastes found at the site; and
  - e) Notification of NDEP if hazardous waste or PCB wastes are discovered at the unit.

The Jungo General Manager/ operator will assume responsibility for managing the waste according to the plan and be responsible for transportation, storage, containment and disposal. Any incident will be logged in the operating record and reported to NDEP.

In summary, if primary load inspections indicate the presence of regulated quantities of hazardous or PCB wastes on incoming haul vehicles, the attendant will refuse to accept the load/ railcar and the appropriate regulatory agencies at the point of generation will be notified. If regulated quantities of hazardous or PCB wastes are identified during secondary, or random inspections, or at any other time, the Jungo General Manager/ operator will be notified, and appropriate steps taken to engage the services of licensed response professionals and to arrange for disposal at a fully licensed disposal facility.

According to 40 CFR 262.34, wastes determined to be hazardous may be stored at the Jungo Disposal Site for up to 90 days. Site personnel will perform the following tasks for all stored material:

- Place the waste in all purpose designated tanks or appropriate storage containers (typically 55-gallon containers); and
- Seal and clearly label storage containers with the date of packaging, the words "Hazardous Waste", the hazardous waste number assigned by the United States Environmental Protection Agency (EPA); and,
- Mark the name and telephone number of the emergency response coordinator on the container.

A fully licensed hazardous waste disposal company will be used to transport waste off-site and a provisional or one-time U.S. Environmental Protection Agency (EPA) identification number will be obtained. The waste will be packaged according to applicable Department of Transportation regulations, and the container will be properly transported and manifested to its point of destination. Proper chain of custody and manifest documents will be obtained from the hazardous materials disposal site in compliance with applicable Federal and State regulations.

In the event that PCB wastes are identified on-site, site personnel will store and ensure disposal of the waste in accordance with 40 CFR Part 761. The following activities will occur:

- An EPA PCB identification number must be obtained;
- The PCB waste will be properly stored until being transported;
- The container will be properly marked with the words "Caution: Contains PCBs"; and,
- The container will be manifested for shipment to a permitted disposal landfill.

#### 6.8.6 Notification

NDEP will be verbally notified within forty-eight hours or two business days if hazardous wastes are discovered in the waste stream delivered to the Jungo Disposal Site. A written report will be submitted to NDEP which identifies the date and time of discovery, type of material (if possible without analytical testing), probable point of loading, the quantity of material, and actions for the removal of the material from the area of discovery within 90 days. The record of notification will be entered into the operating record maintained at the landfill.

## 6.8.7 Waste Acceptance Program

The Jungo Disposal Site is not permitted for, nor will it allow the acceptance of any regulated hazardous waste, or other waste specifically excluded by applicable state and local permits, codes and regulations. During landfill operations, various waste streams will be evaluated for consideration of disposal that may or may not be specified within this operations plan. JLII will routinely evaluate these waste streams for consistency with its permits and applicable regulations, and which will not adversely affect facility operations.

## 7.0 CONTROL OF EXPLOSIVE GAS (NAC 444.667)

Operators of solid waste disposal facilities must ensure that the concentration of methane gas generated by the landfill does not exceed 25 percent of the lower explosive limit (LEL) for methane in landfill structures (excluding gas control or recovery system components), and 100 percent of the LEL for methane at the landfill property boundary. A gas-monitoring plan has been developed for the site and is included with the Report of Design (Volume I). The following discussion addresses the immediate type and frequency of monitoring and the action plan in the event of an exceedance of maximum gas levels.

Monitoring probes will be installed near the first active cell. As the site develops, additional monitoring probes will be added. Each well will contain a screened interval placed at the depth and interval corresponding to the most permeable subsurface layer, and at least as deep as the waste mass. Gas migration will be monitored around the site perimeter in gas monitoring probes, closest to the disturbed area, and within permanent on-site structures. Probes will be sampled for methane on a quarterly basis, and will continue to be monitored throughout the active life of the landfill and the post-closure period. Ambient air in permanent on-site structures will be monitored on an on-going basis through permanently installed monitors with alarms. Methane monitors will ensure that gas concentrations do not exceed 25 percent by volume of the LEL for methane with alarms alerting site employees to the situation. Perimeter gas monitoring probes will be monitored to ensure that gas concentrations do not exceed the 25 percent of the LEL. Quarterly monitoring reports will be prepared and entered into the operating record for the landfill and will be made available to NDEP upon request.

If gas is detected at levels which exceed the LEL for methane in perimeter monitoring probes, or 25 percent of the LEL in permanent landfill structures, action will be taken immediately to ensure protection of public health and safety, and NDEP will be notified in writing immediately. This may include the installation and use of flares. The levels of methane gas detected, and a description of the actions taken to protect public health and safety, will be entered into the operating record within seven days after detection. Within 60 days after detection, a plan for remediating the migration of methane gas in order to ensure the protection of public health and safety will be placed in the operating record and implemented. The plan will describe the nature and extent of the problem, as well as the remediation plan. NDEP will be notified when the plan has been implemented.

## 8.0 **VECTOR CONTROLS (NAC 444.6678, NAC 444.694)**

Vector control and prevention at the Jungo Disposal Site will be accomplished using techniques which provide for the protection of public health and safety and the environment in accordance with NAC 444.6678 and NAC 444.694. The daily application of cover material is the most effective technique used to control vectors; however, any highly putrescible waste accepted at the landfill will be placed in a separate trench or area and covered immediately. Waste disposal operations will occur when a trainload of waste containers is delivered to the site. Consequently, the Jungo Disposal Site will not operate on a set schedule. Instead, the site will operate when needed in order to unload a train within a period of time allotted by the Union Pacific Railroad to meet the terms of the transportation agreement with the railroad. It is anticipated that from the point of train arrival to waste placement, compaction and covering in the landfill will be approximately ten hours, if no extraordinary circumstance are encountered.

"Daily" application of cover material (i.e. during every 24 hour period), therefore, may not be appropriate. Alternatively, Jungo Disposal Site will apply cover material for vector control purposes whenever there is more than a 24-hour period between waste disposal operations. When applied, cover material will be a minimum of six inches thick. This is designed to minimize the exposure of wastes to potential disease vectors by reducing available air space, food sources, and nesting locations. If necessary, rodent populations may be controlled by the use of poisons, traps, smoke devices, or sonar techniques. Avian populations may be scared from the site with the use of noise cannons, falcon deterrents or other effective means.

Insect breeding areas may develop in and around stagnant water left from dust control activities or occasional rain showers and will be addressed as discovered. The uniform grading of fill surfaces and construction of a drainage control system will minimize the presence of standing water at the landfill. The accumulation of fluids in the waste mass is minimized by the restriction of liquid wastes accepted at the landfill. If insect infestations occur in spite of these measures, approved insecticidal sprays will be used.

## 9.0 OPERATION & MAINTENANCE (NAC 444.686)

The Jungo Disposal Site will be operated in a manner, which does not create odors, unsightliness, or other nuisances. The working face will be kept as narrow as possible while maintaining safe and efficient equipment operation. Bulky waste material which may provide for the harborage of rodents will not be used for the final surface of side slopes. Waste will be spread into layers not exceeding two feet in thickness prior to compaction, and compacted using dozers and/or compactors. The equipment will make a minimum of two passes over each waste layer. The perimeter boundary of the extent of waste placement will be at least 100 feet from the property boundary of the site.

**Figure 5** presents the Landfill Base Grading Plan for the Jungo Site. **Figure 6** presents the Landfill Final Cover Grading Plan. The Report of Design (Volume I) details the liner and cover systems and also illustrates the proposed sequencing of construction.

## 10.0 COVER OF COMPACTED WASTE (NAC 444.688)

ADC or a minimum of 6 inches of compacted soil must be used to cover all solid waste at the end of each operating day or at more frequent intervals as necessary to control disease vectors, fires, odors, blowing litter, and scavenging. However, as stated previously in Section 8.0 Jungo Disposal Site will apply cover material whenever there is more than a 24-hour period between waste disposal operations. Cover material can include soil, or ADC including dried sewage sludge, ground construction and demolition wastes, auto shredder wastes, shredded tires or other materials that prevent windblown litter and access to the waste by vectors. NAC 444.688 defines "operating day" to mean the portion of a day during which a site is accepting and disposing of solid waste. Furthermore "operating day" means a period, not to exceed 6 days, that ends with the first interruption of operations, which last 4 hours if:

- 1) The site consistently operates without stopping throughout a 24-hour period; and
- 2) The owner or operator demonstrates to the solid waste management authority that:
  - a) A daily cover requirement would impose a severe operational constraint on the site; and
  - b) Disease vectors, fires, odors, blowing littler and scavenging will be adequately controlled.

With the exception of surfaces which have received a final cover in accordance with NAC 444.6891, surfaces which will not receive additional waste for a period of 90 days or more will be covered by an intermediate cover comprised of a minimum of 12 inches of compacted cover soil. The integrity of the cover will be maintained until filling is resumed or final cover is added. Cover will be routinely inspected and erosion surfaces, cracks, and depressions will be repaired as soon as practicable. Cover will be uniformly graded to promote drainage of surface water with slopes having a grade of not less than three percent.

## 11.0 RUN-ON AND RUN-OFF CONTROL SYSTEM (NAC 444.6885); PROTECTION OF SURFACE WATERS FROM POLLUTANTS AND CONTAMINANTS (NAC 444.6887)

In accordance with NAC 444.6885, owners or operators of Class I municipal solid waste disposal facilities must design, construct, and maintain run-on and run-off drainage structures to control the peak discharge from a 24-hour, 25-year storm event. Hydraulic analyses of drainage areas and run-off patterns for the final closed surface of the landfill have been performed as part of the Report of Design included with this application. Based on the results of these analyses, run-on and run-off drainage control structures have been designed and sized to accommodate the flows resulting from a 24-hour, 25-year precipitation event. Drainage controls are shown on the site design plans within the Report of Design (Volume I).

The Hydrologic and Hydraulic Analysis that has been performed and is included as part of the Report of Design addresses culvert design, drainage ditches and hydrology analysis, satisfying NAC 444.6885 and NAC 444.6887, which states that run-off from the active portion of the landfill must not cause a discharge of pollutants or contaminants into waters of the State or waters of the United States. The active disposal area will be graded to prevent the run-off of contact waters into the site drainage system. Construction of the surface water control devices described in the Report of Design, in conjunction with dry waste management practices which prohibit the disposal of liquid wastes, along with the daily compaction of solid wastes, and the routine application of cover, will protect waters of the State from the discharge of pollutants or contaminants during landfill operation. The surface water drainage system will be monitored to ensure proper operation and effectiveness. Operational practices at the active face and the design of the site drainage system will be modified if it is determined that discharges from the site contain pollutants or contaminants, which may degrade waters of the State. The site was designed with appropriately designed drainage structures to control run-on and run-off.

## 12.0 OPERATING RECORDS (NAC 444.7025)

The following information will be recorded and maintained in the operating record for the Jungo Disposal Site:

- Demonstration of compliance with site location restrictions, as required by NAC 444.678 through 444.6795;
- Records of inspections, personnel training, and procedures for notifications to NDEP relating to hazardous waste discovery, as required by NAC 444.6665;
- Results of gas monitoring activities, as well as any remediation plans and procedures required by NAC 444.667;
- Any documentation relating to the design of the municipal solid waste landfill unit for the placement of leachate or gas condensate in the unit as required by paragraph (b) of subsection 2 of NAC 444.692;
- Any demonstration, certification, finding, monitoring, testing or analytical data from the program for monitoring ground water required by NAC 444.7481 to NAC 444.7499;
- Plans for closure and postclosure and any monitoring, testing, or analytical data required by NAC 444.6891 through 444.6896; and,
- Documentation of cost estimates and financial assurance required by NAC 444.685.
- Training program records will be entered into the personnel file for each participating employee.

The above operating records will be maintained on-site in the administration trailer and will be made available to NDEP upon request or at the time of inspection.

The Jungo Disposal Site has been designed with provisions for leachate collection and removal, ground water monitoring systems and gas well extraction and monitoring control systems. Documentation related to the construction and operation of these systems will be maintained in the operating record.

This Application for a Permit to Construct and Operate a Class I Municipal Solid Waste Disposal Landfill at the Jungo Disposal Site, Humboldt County, Nevada contains the Plan of Operations (including Groundwater Monitoring Plan, Closure Plan, and Postclosure Plan) and Report of Design. These documents constitute the core of the operating record. Following approval and issuance of a permit to operate by NDEP, this operating plan will officially become the operating record for the landfill. The records of inspections, personnel training and hazardous waste, fire incidents and other notifications, as well as the results of gas monitoring and any monitoring required during closure or postclosure activities, will be entered into the operating record as the information is developed. Financial assurance documentation will be provided upon issuance of the Class I permit and made part of the operating record prior to first acceptance of waste. NDEP is hereby notified that these documents are included in the Jungo Disposal Site operating record.

## 13.0 CONTINGENCY PLANS (NAC 444.684(4A-F))

NAC 444.684(4) requires the development of contingency plans to be implemented in the event of an emergency at the site. These plans must include an organized, coordinated, and technically and financially feasible course of action for response to fire or explosion, equipment breakdown, releases of toxic or hazardous material, gas, and failure of run-off containment systems. In addition, an alternative waste handling or disposal system must be developed in the event that the landfill becomes unable to accept waste because of an emergency. The contingency plan for each of these occurrences is described below.

## 13.1 Fire

If a fire breaks out in the waste mass, onsite personnel will assess the severity of the fire and determine whether the available equipment will be sufficient to fight the fire. Onsite landfill personnel are trained to provide immediate fire suppression in the case of a small event (as a rule of thumb an area contained to 10 ft by 10 ft) at or near the active face. Staff will immediately determine if any potential health hazards exist, including toxic chemical fires. If no health hazards exist, the onsite personnel should use fire extinguishers mounted on landfill vehicles, and cover soils stockpiled near the active face as a first line of defense to smother the burning or smoldering area. Water will only be applied to the active face if needed. In the event of a larger fire, or an uncontrolled fire, or if health hazards exist that cannot be managed by onsite personnel, the Humboldt County Fire Department will be contacted and the equipment operator and support personnel will be withdrawn from the area. Estimated response time for the Humboldt County Fire Department is approximately 30 minutes. The Humboldt County Fire Department has the following firefighting equipment: 4,000 Gallon Water Tender, 3 Structural Fire Engines (1,000 Gallons each, 2 of which have 4x4 capability), 1 Fast Attack vehicle (4x4, 250 Gallon water tank), 1 Rescue Engine (Jaws of life, 4x4, and 750 Gallon water tank). On arrival at the landfill, Fire Department personnel will assume responsibility for continued fire abatement activities from the General Manager on site.

In the event of a structure fire, extinguishers and a water truck will be utilized to control the fire. If the fire cannot be controlled, the Humboldt County Fire Department will be notified immediately.

See section 4 of this Operations Plan for additional details.

#### 13.2 Litter Control Program

The litter control program is described in Section 5.0.

#### 13.3 Special Waste Handling

Special waste handling procedures are described in Section 6.0.

#### 13.4 Personnel Safety

The landfill site will have a satellite telephone which will enable contact with the County Sheriff's office, the Fire Department, and the Humboldt County Road Department. At least two staff will be trained in basic safety, first aid, and CPR on an annual basis and will be onsite when operations are active. First aid kits will be maintained in the gatehouse and in landfill vehicles and equipment.

Depending on the severity of an injury, injured personnel may treat themselves, call an emergency response (EMR) team, or have an EMR team called for them. If an EMR team is called to the site, site personnel will complete an incident report form and record the date, time, type of injury, actions taken,

response time of the emergency response service, and the time at which the individual was evacuated from the site, if required.

#### 13.5 Landfill Shutdown

In the unlikely event of an emergency, which requires the short-term closure of the landfill, several options are available. Waste being delivered to the landfill will be off-loaded but not transported to the active disposal area. Waste containers will be stock piled until the emergency has been resolved. Delivery schedules to the landfill will be interrupted and no further waste will be delivered to the site until the situation is resolved. It is anticipated that waste cargo containers would not be stockpiled for any more than five (5) days. Based upon the graduated increase in volume to the maximum loading rate capacity of the Class I Landfill, the total volume stockpiled would be contingent upon the existing loading rate at the time of landfill shutdown. A maximum stockpile of 5-days is anticipated based upon the longest time estimated to organize transportation and make transport and delivery allowances to an acceptable landfill.

## 13.6 Equipment Breakdown

In the event of an equipment breakdown, which cannot be addressed by landfill personnel, backup equipment is readily available from equipment suppliers in Reno or Elko. Breakdown of one piece of equipment will not significantly affect the site to properly manage the waste stream as an operation of this size will routinely employ several pieces of equipment at any one time. An onsite maintenance station will be maintained with an inventory of key spare parts.

#### 13.7 Hazardous Materials Release

The Jungo General Manager and site trained staff will assume responsibility for managing any hazardous material release on the site. This will include calling a licensed emergency response contractor, immediate safety response, isolation, containerization if necessary, preparation for shipping to a certified laboratory, manifesting and notification of proper local and State authorities.

#### 13.8 Leachate Release

The Ground Water Monitoring Plan provides the means for determining the presence of leachate below the liner system and to initiate corrective action in the event that leachate reaches ground water. The presence of leachate in the collection structures is a design function of a leachate collection and removal system (LCRS) and a lined waste management unit. The presence of leachate in a containment structure is expected and is the result of a system that is functioning as originally planned and designed. A copy of the Ground Water Monitoring Plan is included in Appendix D to this Plan of Operations.

## 14.0 MISCELLANEOUS REQUIREMENTS FOR OPERATION

Several miscellaneous operational requirements for a Class I solid waste disposal landfill are specified by NAC 444.690, 444.696, 444.698, 444.700, and 444.702. Procedures for compliance with these provisions at the Jungo Disposal Site are outlined below.

#### **14.1** Signs

Signs posted at the landfill will convey specific information, including the name of the owner and operator of the site, hours of operation, and types of material accepted or excluded, and fees charged. Directional signs will be located throughout the site providing direction to the appropriate disposal areas. This site will not be open to the public. In addition, as required by NAC 444.971, at each access point a sign will be placed that reads:

## ASBESTOS WASTE DISPOSAL SITE

#### **BREATHING ASBESTOS DUST**

## MAY CAUSE LUNG DISEASE AND CANCER

#### 14.2 Erosion and Dust Control

Completed portions of the landfill will be configured and maintained as described in the closure and postclosure plans. Construction of a graded and compacted final cover and subsequent re-vegetation will help prevent erosion, surface deterioration, and fugitive dust generation. A water truck will be available on-site for dust control and cover material compaction as needed and water will be applied as needed to the landfill access roads, haul roads, and borrow areas. A minimum 10,000-gallon water storage tank will be on-site to facilitate filling of the water truck.

#### 14.3 Access Control

As required by NAC 444.698, access to the Jungo Disposal Site will be controlled as to time of day and those authorized to use the site. A site attendant will be on duty during operating hours to control access. A perimeter fence will surround the current disposal area and a locking gate will be installed across the entrance road to the landfill. The fence and locking gate will prevent entry and illegal dumping by unauthorized vehicular traffic.

During inclement weather, on site equipment will be used to clear on-site access roads if required.

#### 14.4 Personnel Facilities

A prefabricated administrative building will be available to site personnel. Portable toilets will be located onsite as needed. Bottled drinking water will be available in the administrative building. In addition, a satellite phone will be provided to the site attendant for outside communications.

## 14.5 Miscellaneous Requirements

NAC 444.702 mandates several additional operational requirements. The procedures, which will be employed to maintain compliance with these requirements, are described below.

- Scavenging Scavenging will be prohibited in all areas of the landfill. This provision will be enforced through the use of access control measures and perimeter fencing.
- Salvaging Salvaging will be prohibited.

- Daily Inspections Site personnel will conduct daily site inspections for litter, scattered
  paper, and other lightweight debris. Recovered waste collected by site laborers will be
  returned to the disposal area for proper disposal.
- Measuring and Recording Incoming waste will be weighed on certified scales at the point of origin.
- Approval of Operation The operation of the Jungo Disposal Site will be considered as approved by the NDEP.
- Quarterly Reports Reports of the quantity of solid waste received at the Jungo Disposal Site will be submitted to the NDEP on a quarterly basis. The reports will be submitted on a form supplied by NDEP.
- Topographic survey- The Jungo Disposal site will conduct a topographic survey, or other approved volumetric survey at least once every 5 years thereafter until the site is closed in accordance with NAC 444.6891, 444.6892 and 444.6893. Each such report will be submitted not later than 5 years after the date on which the immediately preceding report was submitted. The topographic survey will meet the requirement stated in NAC 444.702 (7a-f).

#### 14.6 Training program

The Jungo Disposal Site General Manager and/or Operations Manager will be responsible to ensure that all personnel and visitors have adequate personal protective equipment (PPE) to access the site. In addition the General Manager and/or Operations Manager will be responsible that all personnel are trained in fire suppression, key safety measures, and recognizing and handling procedures if hazardous and PCB wastes are encountered.

Landfill personnel will be trained in the identification of containers and labels used for hazardous and PCB wastes. Training for hazardous material screening procedures will address hazardous waste identification and handling, safety precautions, and record-keeping requirements.

At least two staff will be trained in basic safety, first aid, and CPR on an annual basis and will be onsite when operations are active. First aid kits will be maintained in the gatehouse and in landfill vehicles and equipment.

Training records of every employee will be kept in the operating records.

## 15.0 CLOSURE AND POSTCLOSURE AND FINANCIAL ASSURANCE (NAC 444.6891 THROUGH NAC 444.6897 AND NAC 444.685 THROUGH NAC 444.6859)

Closure and postclosure plans have been prepared for the Jungo Disposal Site and specify activities required for compliance with NAC 444.6891 through NAC 444.6897. These plans are included in **Appendix C** as required by NAC 444.6897. The closure and postclosure plans will be maintained with the site operating records at the Jungo Disposal Site administration trailer.

As discussed in the Closure Plan, the Jungo Disposal Site will complete closure in phases throughout the landfill development. For each closure phase, NDEP will be contacted to request a site visit and inspection to confirm partial closure and that financial assurances are no longer required for the closed area.

The Jungo Disposal Site will utilize a trust fund to demonstrate financial assurance for the Class I operation. NDEP will be notified upon placement and funding of the standby trust fund. Financial assurance estimates for closure and postclosure monitoring and maintenance are included in **Appendix C**.

## 16.0 MONITORING PLAN (NAC 444.683)

Environmental monitoring will be completed during landfill development and following closure and will include groundwater monitoring, leachate monitoring, and landfill gas monitoring. Surface water monitoring will not be completed because there is no nearby surface water body. However, storm water monitoring will be completed in accordance with NPDES requirements. Appendix D includes a monitoring plan that address groundwater, leachate, and landfill gas monitoring.

The monitoring plan focuses on detecting potential releases from the landfill. However, there are no nearby off-site groundwater wells that would be impacted by a release from the site. There are no municipal water wells within 10 miles of the site. The nearest groundwater well is used for agricultural purposes and is located more than one mile northeast of and upgradient from the landfill site.